

Mobility Insights

Know the unknowns

Connected car data provides a wide range of insights about mobility: traffic patterns, vehicle trip duration, charging statistics, just to mention some. From these insights, we are able to create the products and services that will not only make mobility smarter and more sustainable, but ensure its continuous evolution over time. WirelessCar has developed Mobility Insights to unlock the true value of connected car data. It allows car makers and other key stakeholders in the mobility ecosystem to set new industry standards and meet the ever-growing digital demands on mobility providers.

Three key reasons for why *Mobility Insights* will only become more and more important

Receiving, analyzing and learning from mobility insights is a necessity, no matter where you are in the mobility ecosystem. These are some of the key reasons:

- **How can we find a deeper understanding of how vehicles are used?**

How does vehicle usage differ between different markets? How far are vehicles driven each weekday? To what level are vehicles being charged? By having a deeper knowledge of usage behavior, product development and marketing strategies can be enhanced.

- **How can you monetize insights and analyses from connected vehicle data?**

Connected vehicle services allow OEMs to, essentially, sell their cars over and over again; that is, as long as these services remain attractive and relevant to drivers. Connected vehicle services, by their very nature, require perpetual evolution. Mobility insights

are a prerequisite for developing new, state-of-the-art services and enhancing them over time.

- **How can connected vehicle data enable and encourage sustainable mobility?**

By analyzing mobility data, we get a much better understanding of how and when vehicles are used. This information can help bolster sustainable mobility in a variety of ways:

- Fleet owners (in particular) can increase the utilization rate of existing vehicles, based on where and when their cars are most in demand.

- Carsharing solutions can be promoted and customized to better serve a particular market or customer group.

- Electrification can be supported, for example by improving charging infrastructure and its accessibility.

- Insights make it easier to predict the residual value of a vehicle. This allows both vehicle owners and fleet operators to prolong the life and value of their vehicles.

How does WirelessCar's Mobility Insights work?

Mobility Insights offers customers real-time, customizable insights into their mobility data, and excellent connected car services based on that data. By looking at datasets from connected cars, and understanding the patterns involved, better decisions can be made in terms of business operations, service innovation, sustainability, customer care, and more.

The insights come in three stages.

Stage One: Mobility Insights - Descriptive

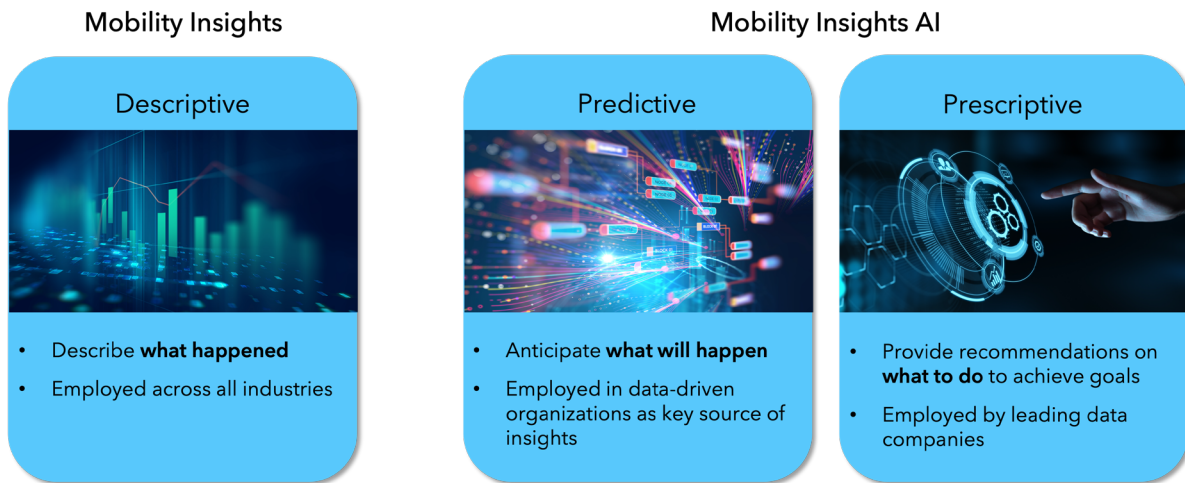
The first is descriptive analytics, which gives an overview of the mobility statistics of a car or fleet. This based on its current status, or previous events that happened while the car or fleet was in operation. Example: "On Mondays you drive 30% more than on an average day."

Stage Two: Options ahead - Predictive - Mobility Insights AI

The second stage is predictive analytics. Through artificial intelligence and advanced machine learning, we can analyze historical data and use it to predict possible outcomes for a vehicle or fleet. Example: "Based on your driving, you are likely to exceed your planned mileage target for the year."

Stage Three: Options ahead - Prescriptive - Mobility Insights AI

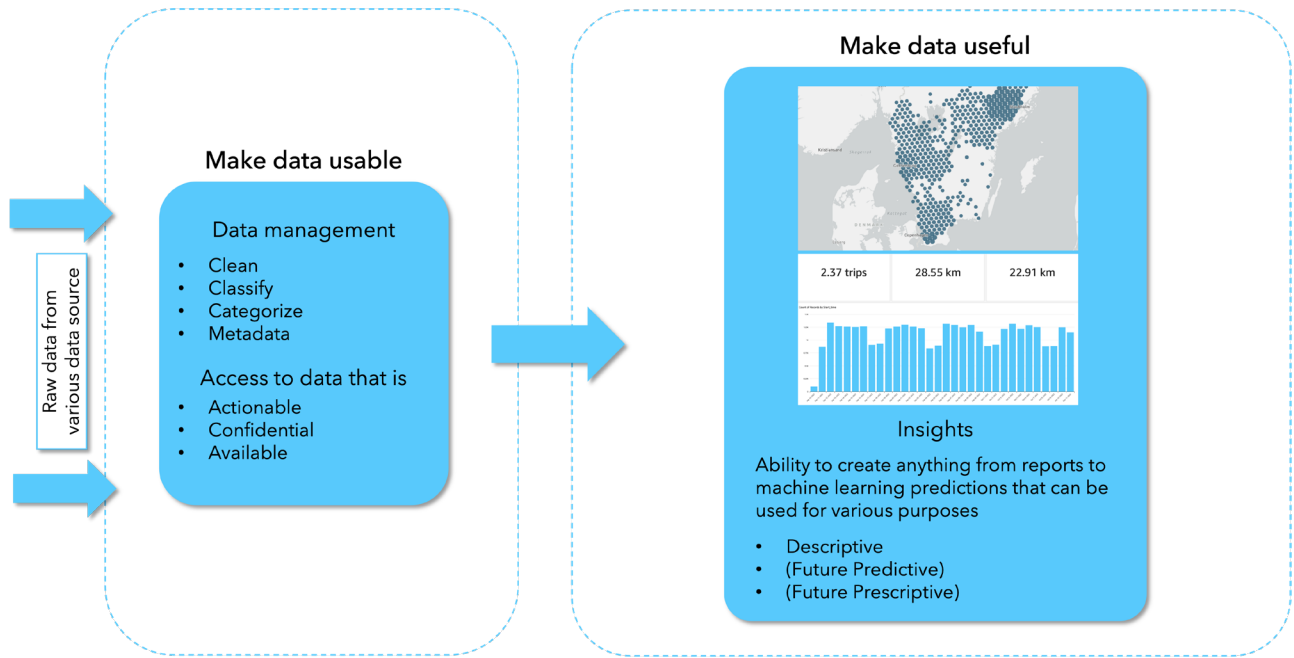
The third stage is prescriptive analytics. Building upon predictive analytics, prescriptive analytics means that actions for a particular, desired outcome can be suggested. Example: "We recommend that you allow your battery to run below 30% before charging it fully."



How we collaborate with our customers on Mobility Insights

Together with the customer, we decide on the initial scope of the data that is to be included in the insight delivery. The process usually starts by looking at the position and trip data. In addition, data from other sources can be added. The data is then cleaned, classified and categorized.

In the next phase, data science is applied through advanced machine learning algorithms. We can now produce reports and analytics, and present them according to whether they are descriptive, predictive, or prescriptive, as outlined above. The deliverables from the data are then produced in the form of mobility insights which leverage service design.



By working together, we are able to extract and realize the true value of our customers' connected car data. Doing so unlocks the potential that comes from monetizable digital services, sustainable mobility, fleet management, and much more.

By leveraging service design and data science, we can suggest data-driven digital service innovations to the OEM's existing services or recommend new value creation opportunities based on the data analyzed, for

the driver, the fleet operator and the OEM in general. Insights from understanding driving behavior, for instance, helps us to unlock potential new offerings which previously did not exist. They can also help to answer questions like, "how far do cars drive on a given day", "what are the range differences in various weather conditions, and what impact does this have on charging or battery health", and "how are vehicles in the fleet charged on average".

Service design

User perspective: Mock-ups of analytics offerings for a typical user



How can different mobility stakeholders benefit from *Mobility Insights*?

Mobility Insights gives car makers insights that:

- Facilitate the development of connected car services
- Support electrification infrastructure and the sales of electric vehicles
- Provide excellent source material for mobility- and transportation-related research
- Improve carbon emission measurement accuracy
- Aid research on service design and new business models
- Unlock service innovation and value creation opportunities for end users

Mobility Insights assists drivers and private vehicle owners by:

- Describing driver behavior, and offering incentives that can improve it
- Informing them about how driver behavior or a certain car model affects fuel consumption
- Indicating where, when and how to best use shared mobility options

Mobility Insights provides fleet operators with:

- Advanced analytics for planning vehicle infrastructure
- Concrete information on electric vehicle use and charging, driver behavior, and mobility patterns
- Answers to questions such as:
 - Are our rental cars primarily used locally, or for longer journeys?
 - Do renters use them for long or short periods of time?
 - Do some cars cross international borders (perhaps in violation of rental agreements)?

Mobility Insights helps city and community planners:

- Improve city, community and infrastructure planning at large
- Determine where to put charging stations for electric cars and parking lots for commuters
- Measure and evaluate local traffic flows and peaks with greater accuracy

About WirelessCar

WirelessCar is one of the world's leading innovators of digital vehicle services. We accelerate service creation and turn vehicle data into business value for consumers, mobility providers, car makers, and society. Founded in 1999, WirelessCar has continuously built upon our heritage and grown our expertise within the automotive industry. Today, we are a highly recognized and award-winning company, connecting more than 12 million vehicles in over 100 countries.

Headquartered in Sweden, with offices in the US, China and Germany, WirelessCar works with global OEMs such as Volkswagen, Jaguar Land Rover, Mercedes-Benz, Nissan, Subaru of America, and Volvo Cars to leverage the full value of connected services to achieve safe, smart, and sustainable mobility.

To learn more about WirelessCar's *Mobility Insights*, [visit our website](#) or contact us directly to book a meeting or demo.

Contact Info

Martin Hallberg, Product Management
martin.hallberg@wirelesscar.com

© WirelessCar Sweden AB 2022

November 2022

www.wirelesscar.com